

WHAT IS CLAIMED IS:

1. A lithographic projection apparatus, comprising:
 - a radiation system constructed to provide a beam of radiation;
 - a support structure to support a patterning device, said patterning device serving to pattern said beam of radiation according to a desired pattern and form a patterned beam;
 - a substrate table for supporting a substrate;
 - a projection system that projects said patterned beam onto a target portion of said substrate; and
 - at least one holding structure having at least one compliant member constructed to hold a pimple plate, said pimple plate constructed to hold one of said patterning device and said substrate.
2. A lithographic projection apparatus according to claim 1, wherein said at least one compliant member includes a membrane.
3. A lithographic projection apparatus according to claim 1, wherein said at least one compliant member includes a pair of parallel flaps.
4. A lithographic projection apparatus according to claim 3, wherein each of said pair of parallel flaps is supported along the respective length of each of said pair of parallel flaps.
5. A lithographic projection apparatus according to claim 1, wherein said pimple plate is substantially rigid in comparison with said at least one compliant member.
6. A lithographic projection apparatus according to claim 1, further comprising:
 - a plurality of supports for supporting said at least one of said patterning device and said substrate and each of said plurality of supports extending substantially perpendicular to a plane of said at least one of said patterning device and said substrate.

7. A lithographic projection apparatus according to claim 6, wherein said plurality of supports are arranged to support said pimple plate at Bessel points.

8. A lithographic projection apparatus according to claim 7, wherein said plurality of supports is three fixed supports.

9. A lithographic projection apparatus according to claim 6, wherein at least one of said plurality of supports provides electrical contact with said pimple plate.

10. A lithographic projection apparatus according to claim 1, further comprising:

an electrostatic clamp constructed to clamp said pimple plate to at least one of said one of said patterning device and said substrate and said at least one compliant member.

11. A lithographic projection apparatus according to claim 1, wherein said beam of radiation comprises EUV radiation.

12. A lithographic projection apparatus according to claim 1, wherein said at least one of said support structure and said substrate table includes said at least one holding structure.

13. A method of manufacturing a device using a lithographic projection apparatus comprising:

providing a beam of radiation;
providing a support structure for supporting a patterning device;
using the patterning device to pattern the beam of radiation according to a desired pattern forming a patterned beam;
providing a substrate table for supporting a substrate;
holding one of the patterned beam and the substrate on a pimple plate during operation of the apparatus;

holding the pimple plate on at least one compliant member; and
projecting the patterned beam onto a target portion of the substrate.

14. A lithographic projection apparatus, comprising:
means for projecting said patterned beam of radiation onto a target portion of a substrate;
holding means for holding at least one of a patterning device and said substrate; and
means for resiliently supporting said holding means.
15. A lithographic projection apparatus, comprising:
a radiation system constructed to provide a beam of radiation;
a pimple plate having protrusions extending from a surface, said pimple plate constructed to hold a removable item on said protrusions;
a holding structure having at least one compliant member constructed to resiliently hold said pimple plate.
16. A lithographic projection apparatus according to claim 15, wherein:
said removable item is one of a patterning device serving to pattern said beam of radiation according to a desired pattern and form a patterned beam and a substrate.